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DEPARTMENT OF COMMERCE AND LABOR

U.S. BUREAU OF THE CENSUS

S. N. D. NORTH, DIRECTOR

BULLETIN 13

A DISCUSSION OF AGE STATISTICS

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CONTENTS.

	Page.
Letter of transmittal	5
Summary of results	7, 8
The inquiry	8, 9
Significance of age statistics	9-11
Errors in the reported ages	11-21
Unknown ages	14, 15
Age groups	15, 16
Children's ages	16-20
Centenarians	20, 21
Age constitution of the population	21, 45
Median and average ages	21-25
Productive and nonproductive ages	25-30
The distribution of the population in 10-year age groups	30-39
The number and proportion of children in the population	40-43
Other age groups	43
The proportions of the sexes in different age groups	43-45
Appendix A. The adjustment of the returns	47-51
Appendix B. Bibliography of discussions of age statistics	53
Diagram	10
Map—Median age of the total population, for states and territories	24

LETTER OF TRANSMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
BUREAU OF THE CENSUS,
Washington, D. C., November 1, 1904.

SIR:

I have the honor to transmit herewith Census Bulletin 13, entitled "A Discussion of Age Statistics." It has been prepared under the supervision of Professor Walter F. Willcox, of Cornell University, special agent of the Bureau of the Census, by Allyn A. Young, assistant professor of finance in Dartmouth College. Professor Young was employed for more than a year in the Census Office and much of his time was spent in studying the age statistics of this and other countries and various mathematical and statistical questions growing out of them. As long ago as 1870 the Census Office perceived the importance of the problems with which this bulletin deals, and in that year secured from the actuary of the Treasury Department a careful study of a part of the field. Since that time comparatively little consideration has been given to them in the United States, but in various European countries, as well as in India and Australasia, mathematicians and statisticians have given them attention and published the results. Professor Young writes after a critical analysis of their investigations, and in the present bulletin he has explained and interpreted the age statistics of the Twelfth Census, making the treatment of the subject in this country, it is believed, fully abreast of the best discussions elsewhere. It is hoped that the bulletin will be found to constitute a distinct advance in the interpretation of this difficult subject.

This bulletin comprises four main divisions:

- (1) A description of the way in which the information as to the ages of the population was obtained, together with an account of the age tables that appear in the previously printed results of the Twelfth Census.
- (2) A short discussion of the general significance of age statistics.
- (3) An examination of the amount and nature of the errors in the reported ages.
- (4) A discussion of some of the more important facts which the census reveals with reference to the age constitution of the population. The topics considered are the median and average ages of the population, the distribution of the population into productive and nonproductive age groups, the population in 10-year age periods, the number of children in the population, and the sex distribution of the population in various age groups. The age constitution of the population of continental United States, classified by sex, nativity, and race or color, is studied for the censuses of 1900, 1890, and 1880. For the census of 1900 the discussion is extended to include the ages of the aggregate population of the states and territories, and of the aggregate population living in cities and in rural districts, classified by sex.

An adjustment of the age returns for continental United States, classified by sex, race, and nativity, and a brief bibliography are printed as appendices.

The practical significance of these inquiries is shown by the statement that one of our highest American authorities has sought by an analysis of the census age figures to show that in all recent censuses there had been serious errors in the enumeration of young children, amounting among those under five years of age to at least a million omissions both in 1890 and in 1900. This argument is traversed by Professor Young, who reaches the gratifying conclusion that there is no conclusive evidence of material omissions either in 1890 or 1900.

Very respectfully,



Director.

Hon. VICTOR H. METCALF,
Secretary of Commerce and Labor.